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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,529	08/23/2005	Ralf Dunkel	CS-848/LeA 36186	5968
34469	7590	12/22/2006	EXAMINER	
BAYER CROPSCIENCE LP Patent Department 100 BAYER ROAD PITTSBURGH, PA 15205-9741			CHENG, KAREN	
			ART UNIT	PAPER NUMBER
			1626	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/22/2006	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)
	10/532,529	DUNKEL ET AL.
	Examiner Karen Cheng	Art Unit 1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 13-23 is/are pending in the application.
- 4a) Of the above claim(s) 19 is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 13-18 and 20-23 is/are rejected.
- 7) Claim(s) 13-18 and 20-23 is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/25/2005.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) Notice of Informal Patent Application
- 6) Other: ____.

DETAILED ACTION

Claims 13-23 are currently pending in the instant case.

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

Lack of Unity Requirement

Claims 13-23 are drawn to more than one inventive concept (as defined by PCT Rule 13), and accordingly, a restriction is required according to the provision set forth in PCT Rule 13.2.

PCT Rule 13.2 states that the international application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept (requirement of unity of invention). PCT Rule 13.2 further states unity of invention as referred to in PCT Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. Special technical features, as defined in PCT Annex B, Part 1(b), include those technical features which define a contribution over the prior art.

PCT Annex B, Part 1(e) provides combinations of different categories of claims and states:

"The method for determining unity of invention under Rule 13.2 shall be construed as permitting, in particular, the inclusion of any one of the following combinations of claims of different categories in the same international application:

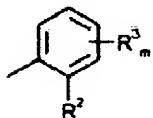
- (i) in addition to an independent claim for a given product, an independent claim for a process specially adapted for the manufacture of the said product, and an independent claim for a use of the said product, or

(ii) in addition to an independent claim for a given process, an independent claim for an apparatus or means specifically designed for carrying out the said process, or

(iii) in addition to an independent claim for a given product, an independent claim for a process specially adapted for the manufacture of the said product and an independent claim for an apparatus or means specifically designed for carrying out the said process,..."

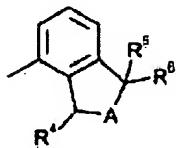
This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

Group I: Claims 13-17 (in part), 18, and 20-23 (in part) drawn to compounds and compositions of formula (I) in which Q represents a group of



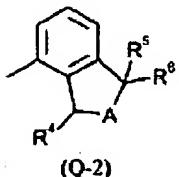
(Q-1) and R¹, R², and R^{3m} are as defined, a process of preparation of said compound and composition, and a method of use of said compound for controlling unwanted microorganisms.

Group II: Claims 13-17 (in part), 19, and 20-23 (in part) drawn to compounds and compositions of formula (I) in which Q represents a group of



(Q-2) and A is O (oxygen) and R¹, R⁴, R⁵, and R⁶ are as defined, a process of preparation of said compound and composition, and a method of use of said compound for controlling unwanted microorganisms.

Group III: Claims 13-17 (in part), 19, and 20-23 (in part) drawn to compounds and compositions of formula (I) in which Q represents a group of

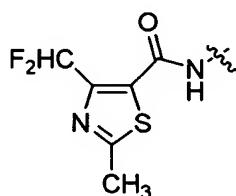


and A is CR¹² and R¹, R⁴, R⁵, R⁶, and R¹² are as defined, a process of preparation of said compound and composition, and a method of use of said compound for controlling unwanted microorganisms.

The claims herein lack unity of invention under PCT Rules 13.1 and 13.2 since under 37 CFR 1.475:

Where a group of inventions is claimed in an application, the requirement of unity of invention shall be fulfilled only when there is a technical feature among those inventions involving one or more of the same or corresponding special technical features... those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art.

Groups I-III lack unity of invention because, pursuant to 37 CFR 1.475(a), the structural moiety common to **Groups I-III** is.



This technical feature is not a special technical feature because it fails to define a contribution over the prior art (see WIPO Pub. No. 99/31984). Therefore, Claims 12-23 are not so linked as to form a single general inventive concept, and there is lack of unity of invention because they lack a special technical feature, and the technical feature present fails to define a contribution over the prior art. Accordingly, unity of invention is

considered to be lacking and restriction of the invention in accordance with the rules of unity of invention is considered to be proper. Additionally, the vastness of the claimed subject matter, and the complications in understanding the claimed subject matter impose a serious burden on any examination of the claimed subject matter.

Therefore, claims do not relate to a single general inventive concept under PCT Rule 13.1 and lack the same or corresponding special technical features, the claims lack unity of invention and should be limited to a product, a process for the manufacture of said product, or a method of use.

Furthermore, with respect to **Groups I-III**, even if unity of invention under 36 CFR 1.475(a) is not lacking, a national stage application, under 37 CFR 1.475(b), containing claims to different categories of invention will be considered to have unity of invention if the claims are drawn to only one of the following combinations:

- (1) A product and a process specially adapted for the manufacture of said product; or
- (2) A product and process of use of said product; or
- (3) A product, a process specially adapted for the manufacture of said product, and a use of said product; or
- (4) A process and an apparatus or means specially designed for carrying out said process; or
- (5) A product, a process specially adapted for the manufacture of said product, and an apparatus or means specially designed for carrying out said process.

Moreover, according to 37 CFR 1.475(c), if an application contains claims to more or less than one of the combinations of categories of invention set forth in paragraph (b), unity of invention might not be present.

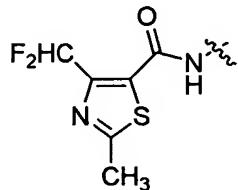
In the instant case, the claims are drawn to multiple products, a process, and a method of use of said product(s). According to 37 CFR 1.475(e),

The determination whether a group of inventions is so linked as to form a single general inventive concept shall be made without regard to whether the inventions are claimed in separate claims or as alternatives within a single claim.

Election

During a telephone conversation with Applicant's Representative Richard Henderson on 11/29/2006 a provisional election was made *with traverse* to prosecute the invention of Group I, comprising Claims 13-17 (in part), 18, and 20-23 (in part). Affirmation of this election must be made by applicant in replying to this Office action.

Applicant's traversal of the lack of unity requirement is not persuasive. As discussed in the lack of unity requirement, the technical feature



is known in the art (see WIPO Pub. No. 99/31984). Therefore, lack of unity has been found, and the restriction is maintained.

Information Disclosure Statement

Applicant's Information Disclosure Statement filed on 4/25/2005 has been considered. Please refer to Applicant's copies of the 1449 submitted herewith.

Priority

The application is a 371 of International Application No. PCT/EP03/11392, filed on 10/15/2003, which claims the benefit of foreign priority under 35 U.S.C. 119, to German Application No. 10250110.6, filed on 10/28/2002. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on

10/28/2002. It is noted, however, that applicant has not provided an English translation of the document as required by 35 U.S.C. 119(b).

Double Patenting

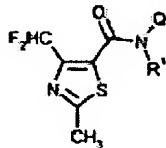
The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

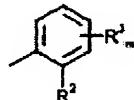
Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Rejection I:

Claims 13-18 and 21-23 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 18-25, 31-33 of copending Application No. 10/530513. Although the conflicting claims are not identical, they are not patentably distinct from the pending claims because applicants are claiming compounds of the following structure



where Q represents



and

R¹ represents hydrogen, C₁-C₆-alkyl, C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl, C₁-C₆-alkoxy-C₁-C₆-alkyl, or C₁-C₆-cycloalkyl; represents C₁-C₆-haloalkyl, C₁-C₆-haloalkylsulfinyl, C₁-C₆-haloalkylsulfonyl, halo-C₁-C₆-alkoxy-C₁-C₆-alkyl, or C₁-C₆-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms; or represents -COR⁷, -CONR⁸R⁹, or -CH₂NR¹⁰R¹¹.

R² represents C₃-C₁₂-cycloalkyl, C₃-C₁₂-cycloalkenyl, C₆-C₁₂-bicycloalkyl, C₆-C₁₂-bicycloalkenyl, each of which is mono- or polysubstituted by identical or different substituents selected from the group consisting

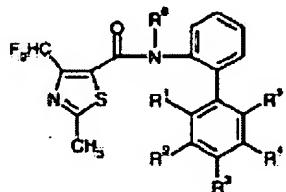
halogen, cyano, hydroxyl, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₆-haloalkyl having 1 to 9 fluorine, chlorine, and/or bromine atoms, and C₁-C₆-haloalkoxy having 1 to 9 fluorine, chlorine, and/or bromine atoms.

R³ represents fluorine, chlorine, bromine, or methyl,
and ^m represents 0, 1, 2, 3, or 4, , a composition comprising one of said compounds and one or more extenders and/or surfactants, a method for controlling

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unwanted microorganisms comprising applying an effective amount of one of said compounds, and a process for preparing a composition comprising mixing one of said compounds with one or more extenders and/or surfactants.

Conflicting claims 8-25, 31-33 of copending Application No. 10/530513 are drawn to compounds of formula



wherein

R⁰ represents C₁-C₄-alkyl, C₁-C₄-alkylsulfonyl, C₁-C₄-alkylsulfonyl, C₁-C₃-alkoxy, C₁-C₃-alkyl, or C₃-C₆-cycloalkyl; R¹ represents C₁-C₄-haloalkyl, C₁-C₄-haloalkylsulfonyl, C₁-C₄-haloalkylsulfonyl, C₁-C₄-haloalkylsulfonyl, C₁-C₄-alkoxy, C₁-C₃-alkyl, C₁-C₄-halocycloalkyl having in each case 1 to 9 fluorine, chlorine, and/or bromine atoms; or represents -COR¹, -CONR²R³, or -CH₂NR¹⁰R¹¹.

and

R¹, R², and R³ independently of one another represent hydrogen, halogen, cyano, nitro, C₁-C₆-alkyl, C₂-C₆-alkenyl, C₁-C₆-alkoxy, C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyl, or C₃-C₆-cycloalkyl; or represent C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-haloalkylthio, or C₁-C₄-haloalkylsulfonyl having in each case 1 to 5 halogen atoms, or

R¹ and R² together or R² and R³ together represent optionally halogen- or C₁-C₆-alkyl-substituted alkenylene,

R⁴ and R⁵ independently of one another represent hydrogen, halogen, cyano, nitro, C₁-C₆-alkyl, C₂-C₆-alkenyl, C₁-C₆-alkoxy, C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyl, or C₃-C₆-cycloalkyl; or represent C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-haloalkylthio, or C₁-C₄-haloalkylsulfonyl having in each case 1 to 5 halogen atoms, or

as well as a composition comprising one of said compounds and one or more extenders and/or surfactants, a method for controlling unwanted microorganisms comprising applying an effective amount of one of said compounds, and a process for preparing a

composition comprising mixing one of said compounds with one or more extenders and/or surfactants.

The difference between the claims at issue and the conflicting claims is found in the scope of the claims. The instant claims are drawn to compounds wherein R² can represent C₃-C₁₂-cycloalkyl, C₃-C₁₂-cycloalkenyl, C₆-C₁₂-bicycloalkyl, C₆-C₁₂-bicycloalkenyl while the conflicting claims are drawn to compounds wherein R² in the conflicting compounds could represent C₃-C₁₂-cycloalkenyl and C₆-C₁₂-bicycloalkenyl. However, the other variables found in the instant claims (R¹, R³, R⁷-R¹¹) are all encompassed in the conflicting claims.

Therefore, it would have been obvious to one of ordinary skill in the art, when faced with the conflicting claims of Application No. 10/530513 to synthesize applicants' instantly claimed compounds for use in preparation of a composition used in controlling unwanted microorganisms, since compounds of similar scope had been administered as part of a method to treat the same condition. The motivation would be the expectation of success in use of applicants' compounds in use of controlling unwanted microorganisms.

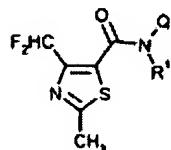
This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Rejection II:

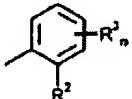
Claims 13-16, 18 and 21-23 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 22-33, 35-37 of copending Application No. 10/502994. Although the conflicting claims are

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identical, they are not patentably distinct from the pending claims because applicants are claiming compounds of the following structure



where Q represents



and

R¹ represents hydrogen, C₁-C₈-alkyl, C₁-C₈-alkylsulfinyl, C₁-C₈-alkylsulfonyl, C₁-C₈-alkoxy-C₁-C₈-alkyl, or C₂-C₈-cycloalkyl; represents C₁-C₈-haloalkyl, C₁-C₈-haloalkylsulfinyl, C₁-C₈-haloalkylsulfonyl, halo-C₁-C₈-alkoxy-C₁-C₈-alkyl, or C₃-C₈-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms; or represents -COR⁷, -CONR⁸R⁹, or -CH₂NR¹⁰R¹¹.

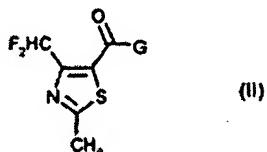
R² represents C₃-C₁₂-cycloalkyl, C₃-C₁₂-cycloalkenyl, C₆-C₁₂-bicycloalkyl, C₆-C₁₂-bicycloalkenyl, each of which is mono- or polysubstituted by identical or different substituents selected from the group consisting

halogen, cyano, hydroxyl, C₁-C₈-alkyl, C₁-C₈-alkoxy, C₁-C₈-haloalkyl having 1 to 9 fluorine, chlorine, and/or bromine atoms, and C₁-C₈-haloalkoxy having 1 to 9 fluorine, chlorine, and/or bromine atoms.

R³ represents fluorine, chlorine, bromine, or methyl,

and m represents 0, 1, 2, 3, or 4. , a composition comprising one of said compounds and one or more extenders and/or surfactants, a method for controlling unwanted microorganisms comprising applying an effective amount of one of said compounds, a process for preparing a composition comprising mixing one of said compounds with one or more extenders and/or surfactants, and a process of preparing said compound comprising reacting

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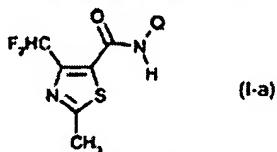
in which G represents halogen, hydroxyl, or C₁-C₆-alkoxy,

with an aniline derivative of formula (III)



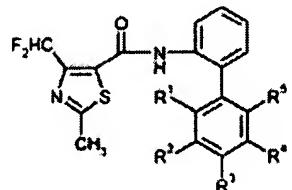
in which Q is as defined for formula (I) in Claim 13,

in the presence of an acid binder and in the presence of a diluent
to form a compound of formula (I-a)



in which Q is as defined for formula (I) in Claim 13, and

Conflicting claims 22-33, 35-37 of copending Application No. 10/502994 are
drawn to compounds of formula



wherein

R¹, R², R³, R⁴, and R⁵ independently of one another represent hydrogen, halogen, cyano, nitro, C₁-C₆-alkyl, C₂-C₆-alkenyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-alkylsulphonyl, or C₂-C₆-cycloalkyl, or represent C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-haloalkylthio, or C₂-C₆-haloalkylsulphonyl having in each case 1 to 5 halogen atoms, with the proviso that R¹, R², R³, R⁴, and R⁵ do not simultaneously represent hydrogen, or
R¹ and R² together or R² and R³ together optionally also represent optionally halogen- or C₁-C₆-alkyl-substituted alkenylenes.

and in further claims, the substituents (R¹-R⁵) are further limited:

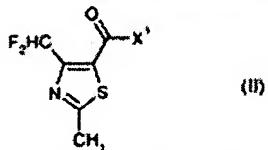
R¹, R², R⁴, and R⁵ each represent hydrogen, and
R³ represents fluorine, chlorine, bromine, methyl, trifluoromethyl, trifluoromethoxy, or trifluoromethylthio.
i.e. Or

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R^1 , R^3 , and R^5 each represent hydrogen, and
 R^2 and R^4 independently of one another represent halogen, cyano, nitro, C_1 - C_6 -alkyl,
 C_2 - C_6 -alkenyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkylthio, C_1 - C_4 -alkylsulphonyl, or C_3 - C_6 -cycloalkyl, or represent C_1 - C_4 -haloalkyl, C_1 - C_4 -haloalkoxy, C_1 - C_4 -haloalkylthio, or C_1 - C_4 -haloalkylsulphonyl having in each case 1 to 5 halogen atoms.

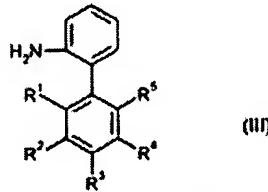
as well as a composition comprising one of said compounds and one or more extenders and/or surfactants, a method for controlling unwanted microorganisms comprising applying an effective amount of one of said compounds, a process for preparing a composition comprising mixing one of said compounds with one or more extenders and/or surfactants, and a process of preparation of the following said compound comprising

(a) reacting a difluoromethylthiazolylcarbonyl halide of formula (II)



in which X' represents halogen,

with an aniline derivative of formula (III)



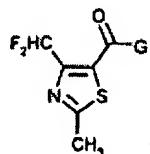
in which R^1 , R^2 , R^3 , R^4 , and R^5 are as defined for formula (I) in

Claim 22,

optionally in the presence of an acid binder and optionally in the presence of a diluent, or

The difference between the claims at issue and the conflicting claims is found in the scope of the claims. The instant claims are drawn to compounds wherein R^2 can represent C_3 - C_{12} -cycloalkyl, C_3 - C_{12} -cycloalkenyl, C_6 - C_{12} -bicycloalkyl, C_6 - C_{12} -bicycloalkenyl while the conflicting claims are drawn to compounds wherein R^2 in the conflicting compounds could represent C_3 - C_{12} -cycloalkenyl and C_6 - C_{12} -bicycloalkenyl.

However, the substitutions of variables R¹-R⁵ of the compounds found in the conflicting claims are all encompassed in the instant claims. Thus, the compounds of the conflicting claims are found within in the instant claims. Additionally the process of preparation the instant claims is drawn to reacting a compound of formula



wherein G represent halogen, hydroxyl, or C₁-C₆-alkoxy with an aniline derivative of H₂N-Q. In the conflicting claims, G represents halogen. Thus the claims overlap in scope and the process of the conflicting claims is found within the instant claims.

Therefore, it would have been obvious to one of ordinary skill in the art, when faced with the conflicting claims of Application No. 10/502994 to synthesize applicants' instantly claimed compounds for use in preparation of a composition used in controlling unwanted microorganisms, since compounds of similar scope had been administered as part of a method to treat the same condition. The motivation would be the expectation of success in use of applicants' compounds in use of controlling unwanted microorganisms.

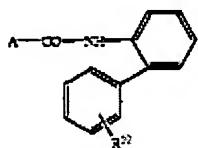
This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

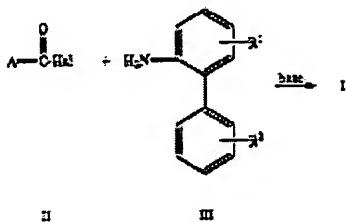
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13-16, 18, 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Schelberger *et al* in US Pat No. 6,346,538 issued on 02/12/2002, which claims priority to PCT No. PCT/EP98/08223 filed on 12/15/1998. Schelberger *et al* disclose compounds of formula



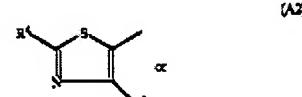
where A can be $\text{R}^1-\text{S}-\text{CH}=\text{CH}_2$ and R^6 is difluoromethyl, R^7 is methyl, and R^{10} is $\text{C}_1\text{-C}_4$ -alkyl, $\text{C}_1\text{-C}_4$ -alkoxy, $\text{C}_1\text{-C}_4$ -alkylthio or halogen (columns 6-7). These compounds anticipate applicant's claimed compounds wherein R^1 represents hydrogen, R^2 represents $\text{C}_3\text{-C}_{12}$ -cycloalkenyl, which is optionally mono- or polysubstituted, and m is 0. The same compounds are anticipated by Schelberger *et al* in further patents (see columns 5-6 of US Pat No. 6,569,875; columns 5-6 of US Pat No. 6,372,748; columns 5-6 of US Pat No. 6,410,572; columns 7-8 of US Pat No. 6,365,608; columns 7-8 of US Pat No. 6,903,108; columns 6-7 of US Pat No. 6,489,348; columns 9-10 of US Pat No. 6,350,765)

Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Eicken *et al* in US Pat No. 5,998,450 issued on 12/07/1999. Eicken *et al* teach a process of preparing said compounds by reacting



wherein R¹ is halogen, preferably chlorine or bromine;
R² is fluorine;
R³ is hydrogen, halogen, C₁-C₄-alkyl, trifluoromethyl, C₁-C₄-alkoxy or C₁-C₄-alkylthio;

wherein A is



and R⁴ is methyl and R⁵ is difluoromethyl (see column 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

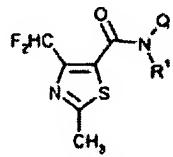
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

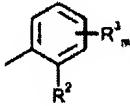
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 13-16, 18, 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehrenfreund *et al* (WIPO Pub No. WO 2003/074491) in view of Patani *et al* (Chem. Rev. 1996, 96, 3147-3150) and Eicken *et al* (US Pat No. 5,998,450) in view of Patani *et al* (Chem. Rev. 1996, 96, 3147-3150) and Eicken *et al* (US Pat No. 5,480,897) in view of Patani *et al* (Chem. Rev. 1996, 96, 3147-3150) and Walter *et al* (US Pub No. 20040138265) in view of Patani *et al* (Chem. Rev. 1996, 96, 3147-3150) and Walter *et al* (WO 2002059086 or US Pub No. 20040138265) in view of Patani *et al* (Chem. Rev. 1996, 96, 3147-3150).

Applicants' instant elected invention in claims 13-16, 18, 20-23 teaches compounds, compositions, method of use, and process of making of formula



where Q represents



and

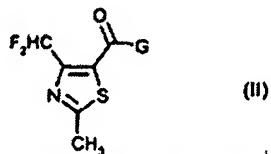
R¹ represents hydrogen, C₁-C₆-alkyl, C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl, C₁-C₆-alkoxy-C₁-C₆-alkyl, or C₃-C₆-cycloalkyl; represents C₁-C₆-haloalkyl, C₁-C₆-haloalkylsulfinyl, C₁-C₆-haloalkylsulfonyl, halo-C₁-C₆-alkoxy-C₁-C₆-alkyl, or C₃-C₆-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms; or represents -COR⁷, -CONR⁸R⁹, or -CH₂NR¹⁰R¹¹.

R² represents C₃-C₁₂-cycloalkyl, C₃-C₁₂-cycloalkenyl, C₆-C₁₂-bicycloalkyl, C₆-C₁₂-bicycloalkenyl, each of which is mono- or polysubstituted by identical or different substituents selected from the group consisting

of halogen, cyano, hydroxyl, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₆-haloalkyl having 1 to 9 fluorine, chlorine, and/or bromine atoms, and C₁-C₆-haloalkoxy having 1 to 9 fluorine, chlorine, and/or bromine atoms,

Art Unit: 1626

R^3 represents fluorine, chlorine, bromine, or methyl,
 and m represents 0, 1, 2, 3, or 4. Further a process of preparation of said compound by reacting



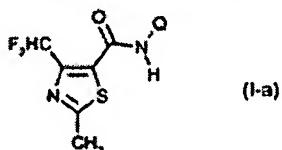
in which G represents halogen, hydroxyl, or C_1 - C_6 -alkoxy,

with an aniline derivative of formula (III)



in which Q is as defined for formula (I) in Claim 13,

in the presence of an acid binder and in the presence of a diluent
 to form a compound of formula (I-a)

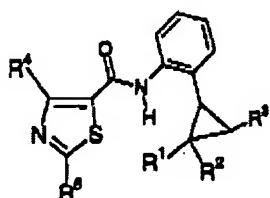


is taught.

Determination of the scope and content of the prior art (MPEP §2141.01)

Ehrenfreund *et al* teach the preparation of compounds of the following formula

(See WIPO Pub No. WO 2003/074491, p. 8-10)



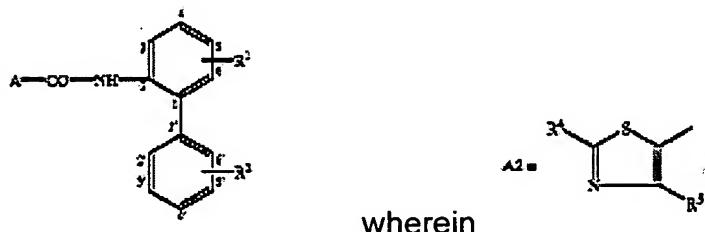
Compound Number	R^1	R^2	R^3	R^4	R^5
4.1	H	H	CH_2CH_3	CF_3	CH_3
4.3	H	H	$CH_2CH_2CH_3$	CF_3	CH_3
4.5	H	H	$CH(CH_3)_2$	CF_3	CH_3
4.8	H	H	$CH_2CH_2CH_2CH_3$	CF_3	CH_3
4.10	H	H	$CH_2CH(CH_3)_2$	CF_3	CH_3

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4.12	H	H	C(CH ₃) ₃	CF ₃	CH ₃
4.20	H	H	cyclopropyl	CF ₃	CH ₃
4.26	H	H	cyclohexyl	CF ₃	CH ₃
4.35	H	H	4-fluorophenyl	CF ₃	CH ₃

Eicken et al teach compounds of formula (See US Pat No. 5,998,450, columns 3-

5)

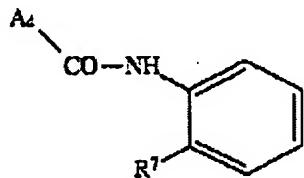


No.	A	R ¹	R ³	R ²	R ⁴	R ⁵	R ⁶
1.53	A2	4-F	H	—	CH ₃	CF ₃	—
1.54	A2	4-F	3-F	—	CH ₃	CF ₃	—
1.55	A2	4-F	3'-Cl	—	CH ₃	CF ₃	—
1.56	A2	4-F	3'-CH ₃	—	CH ₃	CF ₃	—
1.57	A2	4-F	3'-OCBr	—	CH ₃	CF ₃	—
1.58	A2	4-F	3'-OCH(CH ₃) ₂	—	CH ₃	CF ₃	—
1.59	A2	4-F	3'-Br	—	CH ₃	CF ₃	—
1.60	A2	4-F	4-P	—	CH ₃	CF ₃	—
1.61	A2	4-F	4'-Cl	—	CH ₃	CF ₃	—
1.62	A2	4-F	4'-CH ₃	—	CH ₃	CF ₃	—
1.63	A2	4-F	4'-OCH ₃	—	CH ₃	CF ₃	—
1.64	A2	4-F	4'-SCN	—	CH ₃	CF ₃	—
1.65	A2	4-F	H	—	CH ₃	CF ₃	—
1.66	A2	4-F	3-P	—	CH ₃	CF ₃	—
1.67	A2	4-F	3'-Cl	—	CH ₃	CF ₃	—
1.68	A2	4-F	3'-CH ₃	—	CH ₃	CF ₃	—
1.69	A2	4-F	3'-OCBr	—	CH ₃	CF ₃	—
1.70	A2	4-F	3'-OCH(CH ₃) ₂	—	CH ₃	CF ₃	—
1.71	A2	4-F	3'-Br	—	CH ₃	CF ₃	—
1.72	A2	4-F	4'-OCH ₃	—	CH ₃	CF ₃	—
1.73	A2	4-F	4'-SCN	—	CH ₃	CF ₃	—
1.74	A2	4-F	4'-P	—	CH ₃	CF ₃	—
1.75	A2	4-F	4'-Cl	—	CH ₃	CF ₃	—
1.76	A2	4-F	3'-CH ₃	—	CH ₃	CF ₃	—
1.77	A2	4-F	3'-OCBr	—	CH ₃	CF ₃	—
1.78	A2	4-F	3'-OCH(CH ₃) ₂	—	CH ₃	CF ₃	—
1.79	A2	4-F	3'-Br	—	CH ₃	CF ₃	—
1.80	A2	4-F	4'-OCH ₃	—	CH ₃	CF ₃	—
1.81	A2	4-F	4'-SCN	—	CH ₃	CF ₃	—
1.82	A2	4-F	4'-P	—	CH ₃	CF ₃	—
1.83	A2	4-F	4'-Cl	—	CH ₃	CF ₃	—
1.84	A2	4-F	3'-CH ₃	—	CH ₃	CF ₃	—
1.85	A2	4-F	3'-OCBr	—	CH ₃	CF ₃	—
1.86	A2	4-F	3'-OCH(CH ₃) ₂	—	CH ₃	CF ₃	—
1.87	A2	4-F	3'-Br	—	CH ₃	CF ₃	—
1.88	A2	4-F	4'-OCH ₃	—	CH ₃	CF ₃	—
1.89	A2	4-F	4'-SCN	—	CH ₃	CF ₃	—
1.90	A2	4-F	4'-P	—	CH ₃	CF ₃	—
1.91	A2	4-F	3'-Cl	—	CH ₃	CF ₃	—
1.92	A2	4-F	3'-CH ₃	—	CH ₃	CF ₃	—
1.93	A2	4-F	3'-OCBr	—	CH ₃	CF ₃	—
1.94	A2	4-F	3'-OCH(CH ₃) ₂	—	CH ₃	CF ₃	—
1.95	A2	4-F	3'-Br	—	CH ₃	CF ₃	—

Eicken et al teach compounds of formula (See US Pat No. 5,480,897, columns

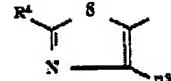
17 and 23, table 9)

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Compounds of the formula V where A is A₄

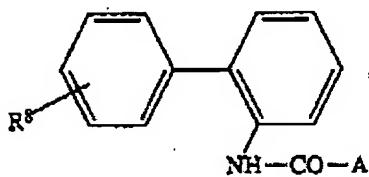
No. R³ R⁴ R⁷

F
wherein A₄ is

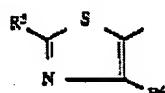


9.50	CF ₃	CH ₃	Cyclopropyl
9.51	CF ₃	CH ₃	Cyclobutyl
9.52	CF ₃	CH ₃	Cyclopentyl
9.53	CF ₃	CH ₃	Cyclohexyl
9.54	CF ₃	CH ₃	2-Cyclopentenyl
9.55	CF ₃	CH ₃	1-Cyclopentenyl
9.56	CF ₃	CH ₃	2-Cyclohexenyl
9.57	CF ₃	CH ₃	1-Cyclohexanyl
9.58	CF ₃	CH ₃	Cyclopentyloxy
9.59	CF ₃	CH ₃	Cyclohexyloxy
9.60	CF ₃	CH ₃	2-Cyclopentenylloxy
9.61	CF ₃	CH ₃	2-Cyclohexenylloxy

They also teach a process of preparation of compounds of formula



III



(A5)

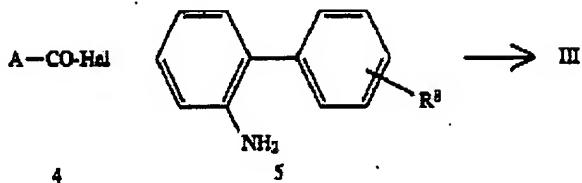
where A can represent

and R³ is methyl, R⁴ is

trifluoromethyl and R⁶C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, halogen

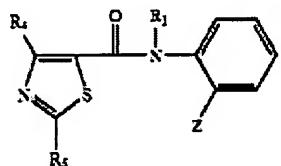
by the following reaction:

Art Unit: 1626



Hal denoting chlorine or bromine, with an ortho-substituted amine of the formula 5 in the presence of a base. The (see columns 12-14).

Walter *et al* teach compounds of formula (See WO 2002059086 or US Pub No. 20040138265, Table 4, columns 18-19).



wherein

Compd. no.	R ₁	R ₂	R ₃	Z
4.01	$-\text{CH}_2\text{CH}=\text{CH}_2$	$-\text{CF}_3$	$-\text{CH}_3$	4-Cl-phenyl
4.02	$-\text{CH}_2\text{CH}=\text{CH}_2$	$-\text{CF}_3$	$-\text{CH}_3$	4-Br-phenyl
4.03	$-\text{CH}_2\text{CH}=\text{CH}_2$	$-\text{CF}_3$	$-\text{CH}_3$	4-Me-cyclohexyl
4.04	$-\text{CH}_2\text{CH}=\text{CH}_2$	$-\text{CF}_3$	$-\text{CH}_3$	3-Me-cyclohexyl
4.05	$-\text{CH}_2\text{CH}=\text{CH}_2$	$-\text{CF}_3$	$-\text{CH}_3$	cycloheptyl
4.07	$-\text{CH}_2\text{C}=\text{CH}$	$-\text{CF}_3$	$-\text{CH}_3$	4-F-phenyl
4.08	$-\text{CH}_2\text{C}=\text{CH}$	$-\text{CF}_3$	$-\text{CH}_3$	4-Cl-phenyl
4.09	$-\text{CH}_2\text{C}=\text{CH}$	$-\text{CF}_3$	$-\text{CH}_3$	4-Br-phenyl
4.10	$-\text{CH}_2\text{C}=\text{CH}$	$-\text{CF}_3$	$-\text{CH}_3$	3-Me-cyclohexyl
4.11	$-\text{CH}_2\text{C}=\text{CH}$	$-\text{CF}_3$	$-\text{CH}_3$	4-Me-cyclohexyl
4.12	$-\text{CH}_2\text{C}=\text{CH}$	$-\text{CF}_3$	$-\text{CH}_3$	3-Me-cyclohexyl
4.13	$-\text{CH}_2\text{C}=\text{CH}$	$-\text{CF}_3$	$-\text{CH}_3$	cycloheptyl
4.19	$-\text{COCH}_3$	$-\text{CF}_3$	$-\text{CH}_3$	4-Cl-phenyl
4.20	$-\text{COCH}_3$	$-\text{CF}_3$	$-\text{CH}_3$	4-Br-phenyl
4.21	$-\text{COCH}_3$	$-\text{CF}_3$	$-\text{CH}_3$	3-Me-cyclohexyl
4.22	$-\text{COCH}_3$	$-\text{CF}_3$	$-\text{CH}_3$	4-Me-cyclohexyl
4.23	$-\text{COCH}_3$	$-\text{CF}_3$	$-\text{CH}_3$	3-Me-cyclohexyl
4.24	$-\text{COCH}_3$	$-\text{CF}_3$	$-\text{CH}_3$	cycloheptyl
4.26	$-\text{COCH}_2\text{CH}_3$	$-\text{CF}_3$	$-\text{CH}_3$	4-F-phenyl
4.27	$-\text{COCH}_2\text{CH}_3$	$-\text{CF}_3$	$-\text{CH}_3$	4-Cl-phenyl
4.28	$-\text{COCH}_2\text{CH}_3$	$-\text{CF}_3$	$-\text{CH}_3$	4-Br-phenyl
4.29	$-\text{COCH}_2\text{CH}_3$	$-\text{CF}_3$	$-\text{CH}_3$	cycloheptyl
4.31	$-\text{COCH}_2\text{OCH}_3$	$-\text{CF}_3$	$-\text{CH}_3$	4-Cl-phenyl
4.32	$-\text{COCH}_2\text{OCH}_3$	$-\text{CF}_3$	$-\text{CH}_3$	4-Br-phenyl

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4.33	$-\text{COCH}_2\text{OCH}_3$	$-\text{CF}_3$	$-\text{CH}_2$	3-Me-cyclohexyl
4.34	$-\text{COCH}_2\text{OCH}_3$	$-\text{CF}_3$	$-\text{CH}_2$	4-Me-cyclohexyl
4.35	$-\text{COCH}_2\text{OCH}_3$	$-\text{CF}_3$	$-\text{CH}_2$	3-Me-cyclohexyl
4.36	$-\text{COCH}_2\text{OCH}_3$	$-\text{CF}_3$	$-\text{CH}_2$	cycloheptyl

4.38	$-\text{COCH}_2\text{OCH}_2\text{CH}_3$	$-\text{CF}_3$	$-\text{CH}_2$	4-F-phenyl
4.39	$-\text{COCH}_2\text{OCH}_2\text{CH}_3$	$-\text{CF}_3$	$-\text{CH}_2$	4-Cl-phenyl
4.40	$-\text{COCH}_2\text{OCH}_2\text{CH}_3$	$-\text{CF}_3$	$-\text{CH}_2$	cycloheptyl

4.42	$-\text{COOCH}_3$	$-\text{CF}_3$	$-\text{CH}_2$	4-F-phenyl
4.43	$-\text{COOCH}_3$	$-\text{CF}_3$	$-\text{CH}_2$	4-Cl-phenyl
4.44	$-\text{COOCH}_3$	$-\text{CF}_3$	$-\text{CH}_2$	4-Br-phenyl
4.45	$-\text{COOCH}_3$	$-\text{CF}_3$	$-\text{CH}_2$	cycloheptyl

Patani *et al* teach that similarities in physicochemical properties allow substitution of certain atoms to elicit similar biological activity and allow for the rational modification of compounds. On p. 3150, Patani states "the ability of fluorine to replace hydrogen is an effective method of exploring the affinity of an agent to the target site by virtue of its greater electronegativity while other parameters such as steric size and lipophilicity are maintained" (see 1st column, paragraph 1).

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The difference between the prior art of Ehrenfreund *et al* in view of Patani *et al* and the instantly claimed compounds of Dunkel *et al* is that Ehrenfreund *et al* inventions have a CF₃ substituent on the 4-position of the thiazole ring rather than a CF₂H substituent in that position found in the instantly claimed invention.

The difference between the prior art of Eicken *et al* in view of Patani *et al* and the instantly claimed compounds of Dunkel *et al* is that Eicken *et al* inventions have a CF₃ substituent on the 4-position of the thiazole ring rather than a CF₂H substituent in that position found in the instantly claimed invention.

The difference between the prior art of Walter *et al* in view of Patani *et al* and the instantly claimed compounds of Dunkel *et al* is that Walter *et al* inventions have a CF₃

substituent on the 4-position of the thiazole ring rather than a CF₂H substituent in that position found in the instantly claimed invention.

Finding of prima facie obviousness- rational and motivation (MPEP §2142-2143)

The prior art of Ehrenfreund *et al* in view of Patani *et al* and Eicken *et al* in view of Patani *et al* and Walter *et al* in view of Patani *et al* are analogous art because all the compounds possess similar activity. The compounds of Ehrenfreund *et al* and Eicken *et al* and Walter *et al* have plant-protective properties and are suitable for protecting plants against infestations by phytopathogenic microorganisms. The teaching of Patani *et al* shows that substitution of hydrogen by fluorine is one of the more commonly employed replacements and can lead to pharmacological differences in the action of the compound. It is common for one skilled in the art to synthesize structurally related compounds in hopes of obtaining greater activity on the desired target. This is commonly known as structure-activity relationship (SAR) in the chemical arts. In the absence of unexpected results, one skilled in the art would expect that the instant claims which are analogous to the compounds of Ehrenfreund *et al* in view of Patani *et al* and the compounds and process of preparation of Eicken *et al* in view of Patani *et al* is prima facie and the compounds of Walter *et al* in view of Patani *et al*. The motivation to make the claimed compounds derives from the expectation that structurally similar compounds are generally expected to have similar properties and have similar utilities. In the instant case, substitution of a hydrogen atom for a fluorine atom would have been desirable in order to find compounds with greater activity in controlling unwanted microorganisms. The explicit teaching of Ehrenfreund *et al* in view of Patani *et al* as

well as Eicken *et al* in view of Patani *et al* and Walter *et al* in view of Patani *et al* together with the enabled examples would have motivated one skilled in the art to modify the known compounds with such generic teaching with the expectation that they would all have similar utility.

Claim Objections

Claims 13-18 and 20-23 are objected to because of the following informalities: it is dependent on subject matter that has been withdrawn from consideration. Appropriate correction is required.

Objections: Contents of Specification

The specification is objected to because bicyclo is misspelled as bicylco (see for example, p. 27, ex. 3). Correction is required. See MPEP § 608.01(b).

Conclusion

No claims are allowed. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen Cheng whose telephone number is 571-272-6233. The examiner can normally be reached on M-F, 9AM to 5:30PM EST.

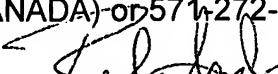
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on (571)272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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